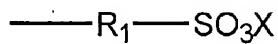


IN THE CLAIMS:

1. (Original) A composite electrolyte membrane comprising a modified silica in which silicon atoms have substituents as represented by formula 1 and formula 2; and an cation exchange group-containing polymer:

Formula 1



Formula 2



wherein, R₁ is an alkylene group with 2-7 carbon atoms, X is a hydrogen atom or an alkali metal, R₂ and R₃ are each independently an alkylene group with 2-7 carbon atoms.

2. (Original) The composite electrolyte membrane according to claim 1, wherein the content of the modified silica is 2 to 20% by weight.

3. (Original) The composite electrolyte membrane according to claim 1, wherein the grain size of the modified silica is 2 to 10 nm.

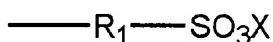
4. (Original) The composite electrolyte membrane according to claim 1, wherein the cation exchange group in the polymer is selected from a sulfonate group, a carboxyl group, a phosphate group, an imide group, a sulfonimide group, and a sulfonamide group.

5. (Original) The composite electrolyte membrane according to claim 1, wherein the cation exchange group-containing polymer is a highly fluorinated polymer which has a sulfonate group as an cation exchange group on one end of the side chain, and in which fluorine atoms amount to at least 90% of the total number of fluorine and hydrogen atoms bound to carbon atoms of the backbone and side chains of the polymer.

6. (Currently Amended) A fuel cell comprising[:] a cathode for reducing an oxidizing agent; an anode for oxidizing fuel; and an electrolyte membrane being placed between the cathode and the anode,

the electrolyte membrane being the a composite electrolyte membrane according to any one of claims 1 to 5. comprising a modified silica in which silicon atoms have substituents as represented by formula 1 and formula 2; and an cation exchange group-containing polymer:

Formula 1



Formula 2



wherein, R₁ is an alkylene group with 2-7 carbon atoms, X is a hydrogen atom or an alkali metal, R₂ and R₃ are each independently an alkylene group with 2-7 carbon atoms.

7. (New) The fuel cell according to claim 6, wherein the content of the modified silica is 2 to 20% by weight.

8. (New) The fuel cell according to claim 6, wherein the grain size of the modified silica is 2 to 10 nm.

9. (New) The fuel cell according to claim 6, wherein the cation exchange group in the polymer is selected from a sulfonate group, a carboxyl group, a phosphate group, an imide group, a sulfonimide group, and a sulfonamide group.

10. (New) The fuel cell according to claim 6, wherein the cation exchange group-containing polymer is a highly fluorinated polymer which has a sulfonate group as an cation exchange group on one end of the side chain, and in which fluorine atoms amount to at least 90% of the total number of fluorine and hydrogen atoms bound to carbon atoms of the backbone and side chains of the polymer.